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1986
1st qtr
Poplar River
Cooperative
Monitoring
Arrangement ...
data exchange,
United States
contribution

POPLAR RIVER COOPERATIVE MONITORING ARRANGEMENT

STATE DOCUMENTS COLLECTION

1986

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FIRST QUARTER DATA EXCHANGE

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INTRODUCTION

1986 - FIRST QUARTER DATA EXCHANGE POPLAR RIVER BASIN

The Poplar River Bilateral Monitoring Committee was authorized by the Governments of Canada and the United States under the Poplar River Cooperative Monitoring Arrangement dated September 23, 1980. The Committee is composed of representatives of the Governments of the United States, State of Montana, Canada, and Province of Saskatchewan. In addition to the representatives of governments, two ex officio members who are local representative of the State of Montana and Province of Saskatchewan participate in activities of the Committee.

One responsibility of the Committee includes the on-going quarterly exchange of results of water quantity, water quality and air quality monitoring programs. The programs are being conducted in Canada and the United States at or near the International Boundary by cooperative monitoring agencies in accordance with the Technical Monitoring Schedules. Monitoring information is to be transmitted by each Committee co-chairman to his counterpart co-chairman within a reasonable period after the termination of each quarter. In addition, pre selected parties are to receive copies of the quarterly exchange.

This package represents information collected by United States sources for the Poplar River basin during the first quarter of 1986. Included are data for surface water quantity and quality, ground water levels. Air quality monitoring was not done during the reporting period.

STREAMFLOW MONITORING

Responsible Agency: U.S. Geological Survey

Daily mean discharge or levels and instantaneous monthly extremes as normally published in surface water data publications.

No. on <u>Map</u>	USGS <u>Station No.</u>	<u>Station Name</u>
1	06178000	Poplar River at International Boundary

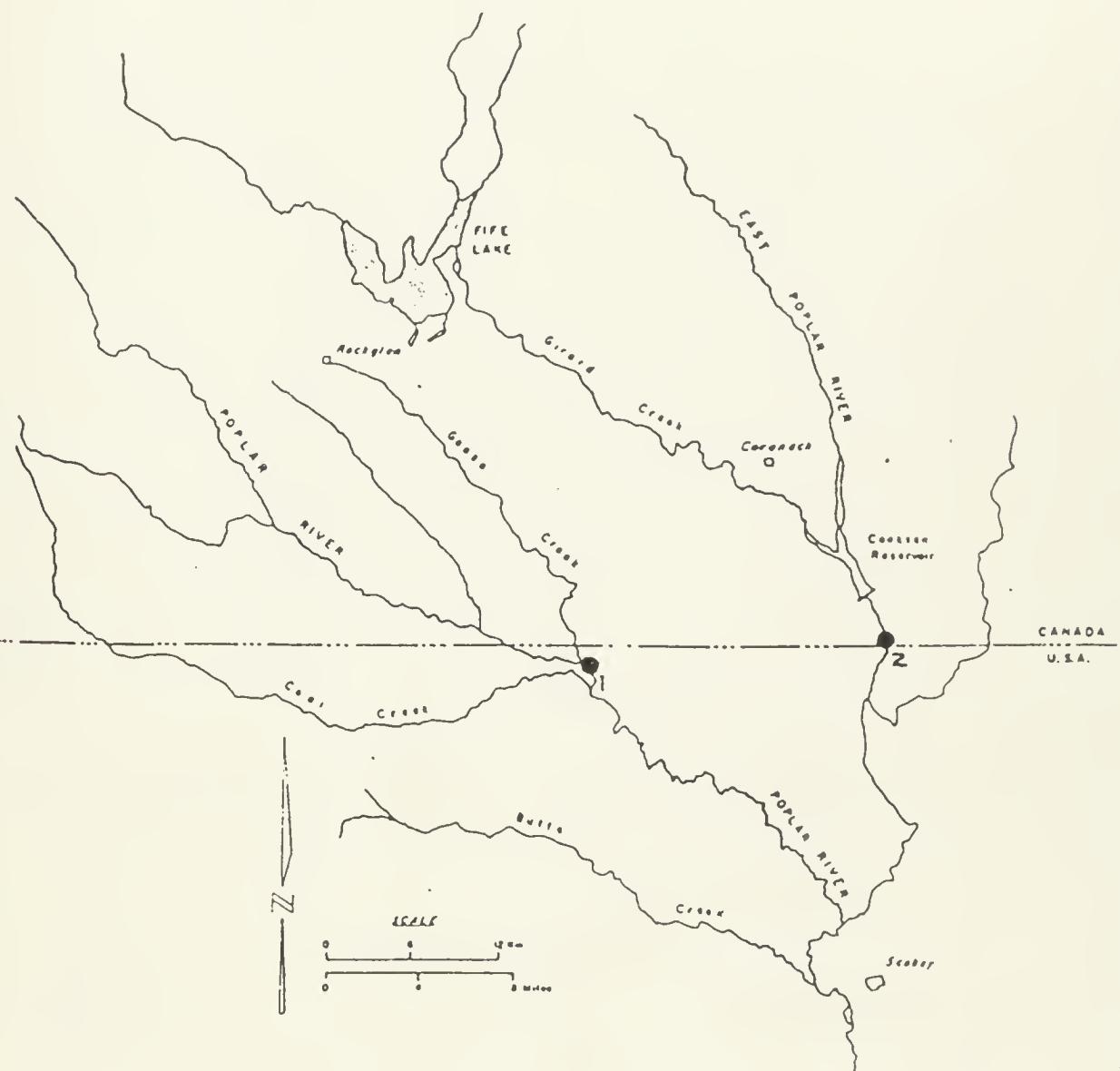
Responsible Agency: Environment Canada

2	06178500	East Poplar River at International Boundary
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HYDROMETRIC GAUGING STATIONS

POPLAR RIVER BASIN

06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY 1986 TO DECEMBER 1986
MEAN VALUES

POPLAR RIVER BASIN

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY 1986 TO DECEMBER 1986
MEAN VALUES

SURFACE WATER QUALITY MONITORING

Station Location

Responsible Agency: U.S. Geological Survey

<u>No. on Map</u>	<u>USGS Station No.</u>	<u>Station Name</u>
1	06178000	Poplar River at International Boundary
2	06178500	East Poplar River at International Boundary
3	06179000	East Poplar River near Scobey

PARAMETERS

WATSTORE*

Sampling Frequency

Code	Parameter	Analytical method	No.		
			1	2	3
00410	Alkalinity-field	Elect. Titration	M	M	M
90410	Alkalinity-lab	Elect. Titration	M	M	M
01106	Aluminum-diss	AA	SA	SA	SA
00610	Ammonia-tot	Colorimetric	M	M	M
00625	Ammonia+Org N-tot	Colorimetric	M	M	M
01000	Arsenic-diss	AA, hydride	SA	SA	SA
01002	Arsenic-tot	AA, hydride	A	A	A
01010	Beryllium-diss	AA	SA	SA	SA
01012	Beryllium-tot/rec	AA-Persulfate	A	A	A
01020	Boron-diss	Colorimetric	M	M	M
01025	Cadmium-diss	AA	SA	SA	SA
01027	Cadmium-tot/rec	AA-persulfate	A	A	A
00915	Calcium	AA	M	M	M
00680	Carbon-tot Org	Wet Oxidation	SA	SA	SA
00940	Chloride-diss	Ion chromatography	M	M	M
01030	Chromium-diss	AA	SA	SA	SA
01034	Chromium-tot/rec	AA-persulfate	A	A	A
00080	Color	Electrometric, visual	M	M	M
00095	Conductivity	Wheatstone Bridge	M	D	M
01040	Copper-diss	AA	SA	SA	SA
01042	Copper-tot/rec	AA-persulfate	A	A	A
00061	Discharge-inst	Direct measur.	M	M	M
00950	Fluoride	Electrometric	M	M	M
01046	Iron-diss	AA	M	M	M
01045	Iron-tot/rec	AA-persulfate	A	A	A
01049	Lead-diss	AA	SA	SA	SA
01051	Lead-tot/rec	AA-persulfate	A	A	A
00925	Magnesium-diss	AA	M	M	M
01056	Manganese-diss	AA	SA	SA	SA
01055	Manganese-tot/rec	AA-persulfate	A	A	A
01065	Nickel-diss	AA	SA	SA	SA
01067	Nickel tot/rec	AA-persulfate	A	A	A
00615	Nitrite-tot	Ion-chromatography	M	M	M
00630	Nitrate+Nitrite-tot	Colorimetric	M	M	M
00300	Oxygen-diss	Winkler/meter	M	M	M
70507	Phos, Ortho-tot	Colorimetric	M	M	M
00400	pH	Electrometric	M	M	M
00665	Phosphorous-tot	Colorimetric	M	M	M
00935	Potassium-diss	AA	M	M	M
00931	SAR	Calculated	M	M	M
80154	Sediment-conc.	Filtration-gravimetric	M	M	M
80155	Sediment-load	Calculated	M	M	M
01145	Selenium-diss	AA, hydride	SA	SA	SA
01147	Selenium tot/rec	AA, hydride	A	A	A
00955	Silica	Colorimetric	M	M	M
00930	Sodium	AA	M	M	M
00945	Sulfate-diss	Colorimetric	M	M	M
70301	Total Dissolved Solids	Calculated	M	M	M
00010	Temp Water	Toluene	M	M	M
00020	Temp Air	Toluene	M	M	M
00076	Turbidity	Nephelometric	M	M	M
80020	Uranium-diss	Fluorimetric	-	MC	-
01090	Zinc-diss	AA	SA	SA	SA
01092	Zinc-tot/rec	AA-persulfate	A	A	A

*Computer storage and retrieval system - USGS

Symbols: C-continuous; D-daily; M-monthly; MC-monthly composite; A-annually at high flow; SA-semi-annually at low and high flow; AA-atomic absorption; tot-total; rec-recoverable, diss-dissolved



SURFACE WATER QUALITY MONITORING STATIONS

POPLAR RIVER BASIN

06178000

POPLAR RIVER AT INTERNATIONAL BOUNDARY

WATER QUALITY DATA

DATE	TIME	BARO-METRIC			WIND			STREAM-FLOW,			SPE-CIFIC		
		TEMPERATURE, AIR (DEG C)	PRESSURE, AIR (MM HG)	CLOUD COVER (PERCENT)	SPEED (MILES PER HOUR)	WEATHER (WHO CODE)	INSTANTANEOUS NUMBER	DUCTANCE (CFS)	OXYGEN, (MG/L)	DIS-SOLVED (00300)	PH (PERCENT)	OXYGEN, (STANDARD UNITS)	
MAR 25...	11:30	4.5	2.0	696	50	E20	1	26	738	8.0	68	5.5	
APR 16...	13:00	3.0	2.0	692	100	E7.0	3	9.9	1030	12.4	102	8.4	

WATER QUALITY DATA

WATER QUALITY DATA

POPLAR RIVER BASIN

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY

SPECIFIC CONDUCTANCE (MICROMHO CM AT 25 DEG C), CALENDAR YEAR JANUARY 1986 TO DECEMBER 1986
ONCE-DAILY

POPLAR RIVER BASIN

06179000 EAST FORK POPLAR RIVER NEAR SCOBY, MT.

WATER QUALITY DATA

DATE	TIME	BARO-METRIC			CLOUD COVER (MM PER-CENT)	WIND SPEED (MILES PER HOUR)	WEATHER (WMO CODE NUMBER)	STREAM-FLOW, INSTANTANEOUS (CFS)	TUR-BID-ITY (NTU)	COLOR (PIAT-INUM-COBALT UNITS)
		TEMPER-ATURE (DEG C)	TEMPER-ATURE, AIR (DEG C)	PRESSURE (HG)						
JAN, 1986										
14...	15:00	0.0	3.0	700	0	E0	0	E1.5	2.5	10
MAR 25...	08:30	4.0	1.5	698	10	E20	1	33	--	--
APR 16...	09:00	2.0	1.0	700	100	E3.0	3	12	--	--
DATE		OXYGEN, DIS-SOLVED			PH	LAB (STAND-ARD)	CARBON DIOXIDE (STAND-ARD)	NITRO-GEN, AMMONIA	NITRO-GEN, NITRITE	NITRO-GEN, AMMONIA + ORGANIC
		SPECIFIC CON-DUCT-ANCE (US/CM)	OXYGEN, DIS-SOLVED (MG/L)	PER-CENT SATUR-ATION						
JAN, 1986										
14...	1,540	--	--	7.5	7.6	41	0.82	<0.01	0.8	<0.10
MAR 25...	1,000	9.9	83	8.8	--	--	--	--	--	--
APR 16...	1,280	9.3	74	8.6	--	--	--	--	--	--

POPLAR RIVER BASIN
06179000 EAST FOR. POPLAR RIVER NEAR SCOREY, MT.--Continued
WATER QUALITY DATA

DATE	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	HARD- NESS AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	
	JAN 14... MAR 25... APR 16...	0.01 -- --	490 -- --	92 -- --	62 -- --	250 -- --	5 -- --	52 -- --	8.7 -- --	9.0 -- --
JAN 14... MAR 25... APR 16...	0.01 -- --	490 -- --	92 -- --	62 -- --	250 -- --	5 -- --	52 -- --	8.7 -- --	9.0 -- --	35U -- --
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS S1O2) (00955)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS (7U3U1)	SOLIDS, DIS- SOLVED (TONS (70303)	PHOS- PHORUS, DIS- SOLVED PER (AC-FT) (7U507)	SPECI- CIFIC CON- TANCE (MG/L AS P) (90095)	ALKA- LINITY DUC- LAB (MG/L AS CACO3) (90410)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)
JAN 14... MAR 25... APR 16...	0.4 -- --	20 -- --	1,900 -- --	33 -- --	1,200 -- --	1.6 -- --	<0.01 -- --	1,750 -- --	678 -- --	485 -- --

GROUND WATER LEVELS TO MONITOR

POTENTIAL DRAWDOWN DUE TO

COAL SEAM DEWATERING

Responsible Agency: Montana Bureau of Mines and Geology

No. on Map Sampling



GROUND WATER PIROMETERS TO MONITER POTENTIAL

DRAWDOWN DUE TO COAL SLAM DEWATERING

Ground-water level measurements

Depth to water (feet)

Well
no.

April 9,
1985

2	218.29
3	82.00
4	60.73
5	20.85
6	21.34
7	79.01
8	13.69
9	14.19
10	5.74
11	-1.02
12	dry
13	135.04
14	212.56
15	224.51
16	41.72
17	248.43
18	247.96
19	126.49
20	dry
21	240.67
22	18.14

(-) Indicates water level above land surface

